

Notice of Allowability

Application No.

09/934,050

Examiner

Patrick J Connolly

Applicant(s)

ALMARZOUK ET AL.

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-31.
3. ☒ The drawings filed on 21 August 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

Claims 1-31 allowed.

The following is an examiner's statement of reasons for allowance:

As to claim 1, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus for detecting wavelength change of a first light signal including: an amplitude splitting interferometer comprising first and second optical paths, the first path having a first index of refraction that varies with wavelength over a wavelength band, the second path having a second index of refraction that is relatively constant over the wavelength band, such that in operation the first light signal enters and exits the amplitude splitting interferometer, whereby interference light is formed, in combination with the rest of the limitations of claim 1.

As to claim 21, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus for detecting the wavelength change of a light signal including: first means for causing a first light to travel along a first optical path having a first index of refraction that varies with wavelength over a wavelength band; second means for causing a second light to travel along a second optical path having a second index of refraction that is relatively constant over the wavelength band; and means for combining the first and second light, in combination with the rest of the limitations of claim 21.

As to claim 22, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus for detecting wavelength jitter including: amplitude splitting interferometer comprising first and second optical paths, the first path having a first index of refraction that varies with wavelength over a wavelength band, the second path having a second

Art Unit: 2877

index of refraction that is relatively constant over the wavelength band, such that in operation the first light signal enters and exits the amplitude splitting interferometer, whereby interference light is formed; and a light modulator optically coupled to the amplitude splitting interferometer, in combination with the rest of the limitations of claim 22.

As to claim 23, the prior art of record, taken alone or in combination, fails to disclose or render obvious an apparatus for detecting wavelength jitter including: light modulator that couples separates a first and second light signal; and an amplitude splitting interferometer coupled to the light modulator, the amplitude splitting interferometer comprising first and second optical paths, the first path having a first index of refraction that varies with wavelength over a wavelength band, the second path having a second index of refraction that is relatively constant over the wavelength band, such that in operation the first light signal enters and exits the amplitude splitting interferometer, whereby interference light is formed, in combination with the rest of the limitations of claim 23.

As to claim 24, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer including: a first optical path optically coupled to a first beamsplitter and having a first index of refraction that varies with wavelength over a wavelength band; and a second optical path optically coupled to said beamsplitter and having a second index of refraction that is relatively constant over the wavelength band, in combination with the rest of the limitations of claim 24.

As to claim 29, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer including: first means for causing a first light to travel along a first optical path having a first index of refraction that varies with wavelength over a wavelength

Art Unit: 2877

band; second means for causing a second light to travel along a second optical path having a second index of refraction that is relatively constant over the wavelength band; and means for combining the first and second light, in combination with the rest of the limitations of claim 29.

As to claim 30, the prior art of record, taken alone or in combination, fails to disclose or render obvious an interferometer including: a first prism having a first index of refraction that varies with wavelength over a wavelength band, the first prism including a first total internal reflection surface; and a second prism joined to the first prism to form a beam splitting surface, the second prism having a second index of refraction that is relatively constant over the wavelength band, the second prism including a second total internal reflection surface, in combination with the rest of the limitations of claim 30.

Art Unit: 2877

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J Connolly whose telephone number is 571.272.2412. The examiner can normally be reached on 9:00 am - 7:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571.272.2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

pjc/pjc

04.15.2007



Samuel A. Turner
Primary Examiner